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Ornithology

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THE CONDOR

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Issued November 29, 1919

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THE CONDOR

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Western Ornithology

Volume XXI

November-December, 1919

Number 6

[Issued November 29, 1919]

AUTOBIOGRAPHICAL NOTES

By HENRY WETHERBEE HENSHAW

(Continued from page 181)

EQUIPMENT OF THE NATURALIST

MY equipment as naturalist was simple enough. A pair of roomy saddlebags enabled me to carry a few bottles for the reception of small specimens, especially insects, and a supply of cartridges, cotton, matches, and other trifles of like nature. I also carried an insect net attached somewhere about my person, while a good doubled-barreled shot-gun, slung on the horn of the saddle, completed my everyday outfit. Thus equipped and clad in rough but serviceable clothing, I have reason to believe that my personal appearance was more striking than ornamental. More than once, when I chanced to meet a solitary horseman on the lonesome trail I saw him slip a hand furtively behind to make sure that his gun was ready. Unquestionably my appearance was quite out of the ordinary, even in a wild country, where the old saw "clothes make the man" is lightly regarded, or not regarded at all, and was, perhaps, equally suggestive to the chance traveller of an escaped lunatic or a highwayman. The insect net particularly excited curiosity, but when I explained I was a "bug hunter from the Smithsonian" I was at once accepted as harmless.

Two stout boxes, one for supplies as powder, shot, arsenic, cotton, and the like, and the other fitted with trays in which to dry and carry bird and mammal skins, a copper tank of alcohol, enclosed for prudential reasons in a stout locked box, and a plant press, were also part of the naturalist's impedimenta. My skinning table was improvised by placing one collecting box on top of the other, and a folding stool enabled me to sit down and to skin birds with reasonable comfort, although several hours work usually developed a number of different sorts of backache.

As we seldom slept two nights in the same place, and as the bird and mammal skins had to be dried while being transported on mule back, I used to place them in paper cones, which I tacked securely to the bottom of the trays. Provided all went well, the skins dried in very good shape, but the stampede of the pack animals, no very rare event, was likely to deposit the skins in a heap in one corner of the tray, a catastrophe which necessitated much labor in reshaping them.

MODERN COLLECTING GUNS

The collector of today little realizes the boon he has inherited in the small bore guns which are such convenient and efficient collecting tools. When I began work on the Wheeler Survey all my collecting was done with a twelve

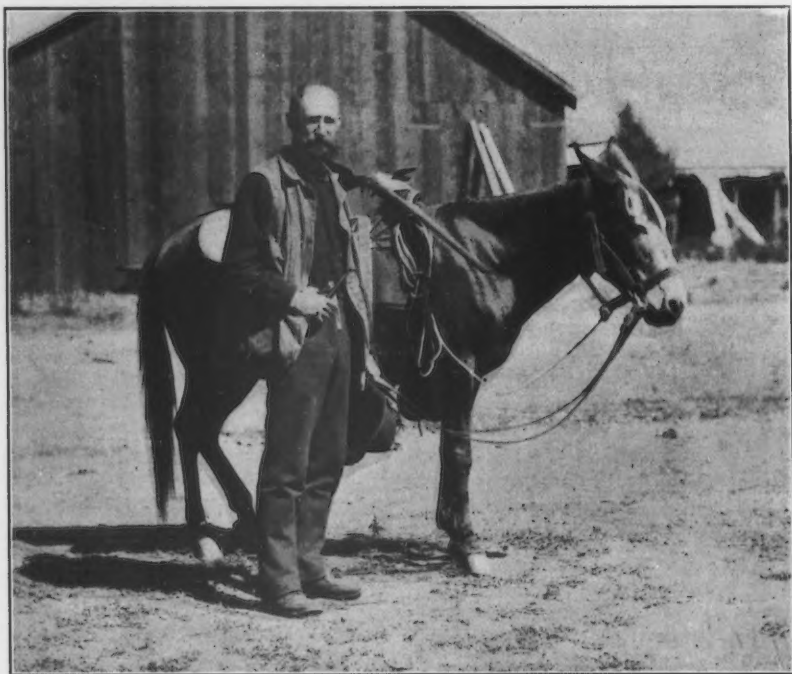


Fig. 46. HENRY WETHERBEE HENSHAW AS A MEMBER OF THE WHEELER EXPEDITION IN 1877; NOTE EQUIPMENT OF THE FIELD COLLECTOR OF THAT PERIOD.

gauge breech loader, a fearsome weapon to use on hummers and other small species. Brewster and I often discussed the possibility of a better collecting tool, and finally he had a Boston gunsmith make an auxiliary barrel for a twelve gauge gun, carrying a twenty-two cartridge. Meantime I had found in a Washington gun store a Remington cane gun. I had the rifling removed, and then began experimenting with the twenty-two extra long cartridges—if I mistake not just then brought out—and with various kinds of powders and

wads to determine the most effective load and the one making the least noise. Both the twenty-two auxiliary, and later the thirty-two and the cane gun, proved great successes, and in time practically all the collectors known to me were supplied with one or both, most of which were made in Washington.

DIFFICULTIES ATTENDING FIELD NATURAL HISTORY WORK

As has been stated, the main purpose of the Wheeler Survey was the mapping of the country traversed, while geology and natural history were but secondary objects. Thus most of the time our collecting had to be done while on the march, and the specimens cared for at night. Not rarely, in order to be sure and save rare birds I dismounted and used the saddle on my mule as a dissecting table, and I can assure my readers that the process is an interesting one and likely to tax all his skill and patience, especially when flies are numerous and the mule restive.

The route followed by our parties often carried us through territory unfruitful for the naturalist, although inviting collecting grounds might be visible in the adjacent mountains, which the exigencies of the topographical work forbade us to enter. While the chiefs of the parties furnished the scientific staff all the opportunities for their investigations possible consistent with the successful prosecution of the topographical work, even so, the results of our work were comparatively small, considering the time spent in the field. Much of the time Indians had to be reckoned with, even when not openly hostile, and the scientific assistants were directed always to carry the revolver or carbine formally issued to them. These proved a nuisance, and I am happy to say were never actually needed. Indeed they proved worse than useless, since revolvers in unaccustomed hands resulted in the death of one member of the Survey and the disabling of another.

LENGTH OF FIELD SEASON AND OFFICE WORK

The length of our field seasons varied much, depending largely on the time of the passage of the appropriation bills, say from June till November, or even December. Field work completed, there followed the office work in Washington where reports of progress and final reports were completed. Much to my regret my own reports on the birds were limited strictly to the results obtained by myself and the other members of the Expedition, which of course materially limited their scope.

MAMMALS OF THE UNITED STATES

Recalling my several years experience as a collecting naturalist in the far west, it seems strange how small was the number of mammals collected compared with that of birds. While it was true that I was much more interested in birds than in mammals, I was fully alive to the importance of securing all the mammals possible, and never allowed an opportunity to collect them, especially the smaller species, to pass unimproved.

The fact is that the earlier naturalists knew practically nothing about trapping, even if the speed with which they usually traversed the country had not precluded the systematic use of traps. Mammals of the size of rabbits and squirrels were easily obtained, and I collected many, as did my predecessors. But the presence of the smaller rodents, especially mice and other nocturnal species, was only dimly suspected, and these were obtained for the most part only when chance threw them in the way of the collector. Moreover, even as

late as the early eighties most of us had come to believe that practically all the mammals of the country had been collected and described, and it was not until the days of the Biological Survey that a hint of the real richness of the mammal life of the country was made known. By 1885 Merriam had revolutionized the making of mammal skins, following in a general way the model of the perfected bird skin. Instead of flat and shapeless things, mammals skins became for the first time, if not things of beauty, at least shapely and durable specimens, which admirably served the purposes of scientific study.

Having employed Vernon Bailey in Minnesota about 1883 to trap small mammals, Merriam soon learned what could be accomplished by the use of traps in skilled hands. The Survey was established in 1885, but it was not until several years later that the survey naturalists began a systematic and exhaustive search for mammals, which they were able to do owing to the invention of the several types of small traps. These proved a practical and efficient means of securing small mammals in any numbers desired for systematic study. The result was series of small mammals hitherto undreamed of, and scores of new forms were obtained in the very territory which the earlier naturalists had found comparatively barren.

Thus in 1885 there were known from the territory north of Mexico approximately only 363 species of mammals, large and small. In 1900, 1450 had been described and recorded; while in 1912 the number recorded by Miller in his check list had reached a total of 2138! At the present time the number of described forms is probably not far from 2500. These figures are only approximately correct, since authorities differ rather widely as to the status of many of the forms, and as to the concept of species and varieties. Nevertheless the greater number of the forms described were new to science in every sense of the word, and their discovery was chiefly due to improved methods of search, especially to improved traps and to skilful and systematic trapping.

THE OLD SOUTH TOWER

In the seventies, Robert Ridgway and Doctor Coues used to do much of their writing in a room near the top of the old south tower of the Smithsonian building, and many were the pleasant hours I spent there in their company and that of visiting ornithologists, as Wheaton, Sennett, Brewster, Merriam and others, who occasionally made pilgrimages to Washington with specimens for examination and field experiences to narrate.

Doctor Coues' readiness to break off work for a chat was always signified by pulling forth the human skull in which he stored his tobacco and rolling a cigarette, when he was ready for reminiscences or discussion. It may interest my readers to know that Dr. Coues' real "working day" at home began about nine or ten o'clock at night and continued till early morning, say two or three o'clock. Then he slept for several hours, followed by breakfast whenever he felt inclined to arise. Hence he usually reached the Smithsonian about noon, when he opened his mail, and began his afternoon's labor of writing, or examining specimens, as the mood prompted him.

He had a small collection of birds in the tower, about 300 in number, which I remember as a somewhat miscellaneous assortment, many of which, no doubt, had been given him by friends. These he presented to the Museum in 1881, and the same year Mr. Ridgway turned in his fine collection of North American and tropical birds, amounting to some 2300 skins. Later, a rule of the Museum was

promulgated prohibiting any Curator from maintaining a private collection of his own. The rule, which seems to me to be a wise one, was evidently intended to prevent a division of interest, and to focus all the time and attention of the Curators upon the Museum collections.

THE WEST BASEMENT

Another scientific sanctuary in the old Smithsonian building, redolent of many odors and fond memories, was the west basement, in a room of which was stored the extensive collection of reptiles and batrachians, the accumulation of years by the western survey expeditions and of donations from private individuals. Here Dr. Yarrow and I spent much time preparing reports on the collections of the Wheeler Survey. Here also Dr. Yarrow made some interesting experiments with live snakes. Not rarely Prof. Baird looked in upon us as he passed along on one of his frequent inspection trips through the building. Here also occasionally came Prof. E. D. Cope, whose astonishing memory for natural history details was always a source of wonder to me. Here also I used to see Prof. David Jordan at work on fishes when he made one of his rare visits to Washington.

ACQUAINTANCE WITH DR. D. WEBSTER PRENTISS

Mention of Dr. Coues' name naturally recalls that of his associate in the publication of the earliest list of the birds of the District of Columbia, Dr. D. W. Prentiss. Coues and Prentiss were college mates at the Columbian University between the years 1858-1862. Their first list of the birds of the District was published in 1862 in the annual report of the Smithsonian Institution for 1861, and was the result of much boyish enthusiasm in the study of birds, together with no small amount of hard work. Needless to say that for the time it was an excellent piece of work. Nearly twenty-five years later was published in 1883 their "Avifauna Columbiana" which brought the subject up to date, and in many ways marked a great advance over its predecessor.

Soon after, both men entered the army as surgeons in the Civil War. After the war the demands of a growing practice in Washington caused Dr. Prentiss to relinquish all active work in ornithology, but he never entirely forgot his old love, and in the early eighties he and I made a number of trips after warblers to my favorite collecting grounds along the banks of the picturesque Rock Creek, the site of the present National Zoological Park. On these occasions we were up betimes in the morning, and after a hasty bite were off so as to be on the ground between four and five o'clock, a time of day dear to all bird collectors. I recall with pleasure the Doctor's enthusiasm over the first Blackburnian Warbler he collected and the first he had ever seen.

The Doctor was something of a sportsman in his younger days, and among other reminiscences, told me that, as boys, he and Dr. Coues had killed English snipe in a "little springy place" on Dupont Circle, in the heart of what is now, or recently was, the fashionable residence part of Washington. He and I made one memorable trip to the Patuxent River after soras when an extraordinarily high tide flooded the marshes, and gave such shooting as comes to a man, if at all, but once in his life.

ACQUAINTANCE WITH GEO. N. LAWRENCE

During my annual trips from Washington to Boston I never failed to call on the veteran ornithologist, Geo. N. Lawrence, in New York. As I made my

way from the train directly to his house, and, as I arrived early in the morning, usually Sunday, I generally found him, where he naturally would be expected to be, in bed. However, he always arose with alacrity, and before a bright fire in his study was ready for a talk on my last season's work, and for the exhibition of any notable specimens he had received from the Tropics since my last visit. He was a very genial and courteous gentleman of the old school, and retained his interest in ornithology to the last.

DUPLICATES OF WESTERN BIRDS ASSIGNED TO ME

My interest in collecting large series of western birds was greatly increased by the privilege accorded me by Lieut. Wheeler, and assented to by Prof. Baird, of selecting from the duplicates of each year a series for my own collection. In those days western birds were rare indeed, and my collection soon became very valuable as a study series. With the permission of Prof. Baird I finally brought it to Washington and stored it in the Smithsonian, within easy access of Mr. Ridgway and myself, and I was enabled in my spare time to rearrange, label and prepare a card catalogue of it. This card catalogue is still extant and has proved valuable to others besides myself for reference purposes.

(To be continued)

BIRD NOTES FROM SASKATCHEWAN

By H. H. MITCHELL

WITH THREE PHOTOS

PROBABLY Saskatchewan, of all the Canadian Provinces, is the least known from an ornithological point of view. With an area equal to the states of North Dakota, South Dakota and Nebraska, it consequently offers a large field of possibilities. In the south-west, bordering on the state of Montana, is an arid, or semi-arid district, the more or less rolling prairie of which is broken by the low, partly wooded Cypress Hills, with considerable sage-brush on the southern slopes. Farther north and eastward is the more level wheat-producing bare prairie. Partly wooded areas then extend northward to the Saskatchewan River, north branch, beyond which is the comparatively little known forest country, with its larger lakes, reaching Lake Athabaska and Reindeer Lake near the northern boundary of the province.

Spizella breweri. Brewer Sparrow. It was in the district first mentioned above, in the valley of the Frenchman River, that I found this species, June 16, 1919, evidently breeding in numbers in the sage-brush patches on the river-flats and open southern slopes of the Cypress Hills. I believe the birds were fairly common between Eastend and Ravenserag, possibly extending to points farther west. Time permitted me only to work a few miles west of Eastend, mostly on the ranch of Mr. Lawrence Potter, who, by the way, is one of our few reliable bird observers. Along the valley on his ranch alone we estimated

there were eight or ten pairs of birds, based on males we saw and heard. The females were evidently sitting and were not observed, nor did we find a nest. Males taken were breeding birds, and Mr. Fleming, of Toronto, to whom I sent a couple of skins for positive identification, agrees with my opinion that this is the first record of the species east of the Rockies, certainly the first for Saskatchewan.

***Zonotrichia leucophrys leucophrys*.** White-crowned Sparrow. Several pairs of this species were noted in the above district, and thanks to Mr. Potter's vigilance, a nest with five eggs, incubation advanced, was found on his ranch June 18, 1919. Mr. A. C. Bent and Mr. Spreadborough, I believe, mention it as common in 1907 and 1908 in the Cypress Hills and apparently breeding,



Fig. 47. THE SOUTH CYPRESS HILLS, NEAR EASTEND, SASKATCHEWAN; NEST OF FERRUGINOUS ROUGH-LEGGED HAWK IN FOREGROUND.

though I do not know if the actual finding of nests and eggs has before been recorded from the region. It is interesting to note that we have a skin of *Z. l. gambeli* in the Provincial Museum taken at Reindeer Lake, July 16, 1914.

***Spizella socialis socialis*.** Chipping Sparrow. As far as my observations go, this bird is not common in any part of the province. A breeding male was taken in the Cypress Hills, June 15, 1919.

***Otocoris alpestris leucolaema*.** Desert Horned Lark. From specimens taken in the Cypress Hills, this would appear to be the only form found in that region.



Fig. 48. NESTING SITE OF WHITE-CROWNED SPARROW (MARKED BY HANDKERCHIEF);
CYPRESS HILLS, SASKATCHEWAN, JUNE 18, 1919.



Fig. 49. NEST OF WHITE-CROWNED SPARROW IN WILD GOOSEBERRY BUSH;
CYPRESS HILLS, SASKATCHEWAN, JUNE 18, 1919.

Antrostomus vociferus vociferus. Whip-poor-will. In looking up records of the Whip-poor-will in western Canada, I could find none for Saskatchewan. I was therefore glad to have the opportunity to investigate some reports I had heard of its occurrence along the Saskatchewan River east of Prince Albert. On July 15 of this year I reached the district near where the South joins the North Saskatchewan River, about thirty miles east of Prince Albert. My guide and I arrived at our camp-site late in the evening; while putting up the tent, I was delighted to hear the bird I was after, "singing" in the poplar woods quite near us. The following nights I heard it much farther away, if it was the same bird, though my guide told me that some years one could hear three or four birds "singing" in the neighborhood. Evidently it had moved to another "bush" about a mile from camp. I located it there on the 20th, after tramping the ground to and fro till late in the afternoon. It flushed a couple of yards from my feet. This proved to be a male; careful search in the neighborhood failed to discover the female, and as I did not hear another songster the succeeding nights I was there, apparently there was but the one pair in the district.

Regina, Saskatchewan, August 18, 1919.

A RETURN TO THE DAKOTA LAKE REGION

By FLORENCE MERRIAM BAILEY

(Continued from page 193)

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ON the south shore of the lake where the Holbøll family was generally found, families of Pied-bill and Horned Grebes were also seen, the east and south shores being the favorite feeding grounds of the Grebes of the lake. One family of peeping young Pied-bills was seen near shore where an oily green scum had formed on the water, so thick that a yellow and black snake squirmed its way along on top of it, its coils actually gathering and piling up the greasy looking substance. In walking softly along the wooded bank above, I heard the Pied-bills talking and found them about a thin screen of tule. The mother gave a queer note of warning, whereupon the six young—easily recognized by their black and white striped necks—swam out a little and watched me. Farther along some larger young, caring for themselves, swam along shore examining me, two of them, wet from diving, in profile showing wisps of sharp-pointed tails. One stretched its neck high to see me better, and as it turned its head from side to side was reflected in the still water near shore.

Near the spot where the old Holbøll drove off the light-cheeked Horned Grebe that used to swim by itself, on August 16, on looking through the trees I discovered a Horned Grebe swimming and diving with two almost grown white-throated young. Was this the mate of the light-cheeked one, come from her nest with her brood at last? They noticed my least motion and kept out a little though evidently wanting to come in shore. The next day, in the same

place I found a pretty group—three striped-necked young Pied-bills sitting on the water close together. In a few moments they were joined by three other young Grebes, presumably those seen on the previous day as birds are very local in their habits; and the six sat there watching my shore while I was watching them. Were the mothers of both broods giving lessons in self-reliance? As we all sat quietly taking note of each other, the willowy cry of a Flicker came from the woods behind me, the song of a Sora rang out brightly from a marsh in the distance, and the keen *Pet-er-weet, weet, weet* of one of a family of Spotted Sandpipers that patrolled the shore called attention to a teetering figure below. Then a young Franklin Gull swam by, mirrored in the water, picking lightly from the surface as it went.

Up the shore beyond the Grebes and Sandpipers an old fence line extended out into the water like that in the farmhouse corner of the lake, also affording convenient roosting places for Night Herons. So much at home did they feel here that one of them held his post even when a line of cattle waded splashing out along the shore behind him. Three of the tall, yellow-legged birds were standing on the fence posts one afternoon when I arrived, while in the cove beyond, a fourth stood with his back to a tule wall. One of the row of three, probably catching sight of a minnow, suddenly dropped to the surface of the water, after which he returned to his fishing post. The hungriest looking of the three stood with body bent to the horizontal, staring down anxiously upon the water, and as its pangs increased, leaned still farther, ready to pitch forward. The one on the post behind, however, stood calmly back, with head up in judicial pose—probably he had had more breakfast! The Hungry One, finding poor fishing at his post, left, whereupon the Well Fed One yawned, and rising deliberately with yellow legs hanging, flapped slowly across to the deserted post. What did he care if the fishing were poor there?

Across the cove another fisherman with form only vaguely suggested inside a bank of tules moved mysteriously down the line. Herons certainly pin their faith to blinds! He was far enough back inside his to make it effective, but in cases where the screen is too thin, the large size of the birds makes them conspicuous. Still, we must not forget the principle enunciated by Abbott Thayer, for light underparts seen from below when near the water doubtless tone out against the light sky to offset the conspicuous size.

A third short section of fence running out into the water on the south shore was occasionally used by perching Night Herons, but it was also used by the family of Spotted Sandpipers. Once they swung in and lit on the barbed wire and when rested started to walk the tight rope, wings up to steady themselves. Some green lake weed, hanging from the wire, cushioned a section for them, but when they reached the bare sharp barbs, I noticed that they lifted their feet quickly and nervously.

Besides Herons, Grebes, and Sandpipers, families of Ducks were occasionally seen along the south shore. One of the families of Pintails seen about the lake—a brood of eleven whose small-billed mother had brought them across from the western side to be sheltered from a strong east wind by the eastern wall and its tule border—on several consecutive days were found along the wooded south shore where the brood was feeding busily, picking dainty morsels from the surface of the water. Sometimes they swam behind the mother, all eleven woolly ducklings in single file, and once they divided and partly en-

circled her, making a lovely intimate family picture. At some bit of carelessness on my part on the bank above, however, the mother gave a warning note and the brood swam farther out from shore.

On the morning of August 10, when a cold northwest wind had driven all but a few Coots and Ruddies from the south side of the lake, and the water was rough, and foam lay piled along the shore, to my surprise I discovered the pretty Pintail and her downy brood. Not far out, to be sure, but riding the small rollers with such evident satisfaction one imagined them quite capable of ocean voyages! As they rocked over the waves they preened themselves nonchalantly, if the spray broke over them, shaking their little heads casually. Their mother, a good sailor too, preened as she rode, her head back over her shoulders, letting the waves roll her as they would. The downy ducklings dived prettily and on coming up gave a little jump and a shake of the head. But—what had become of the eleventh? There were only ten, now. Had the family slept too near to shore? There was a strong mephitic odor along the bank.

In this same place, when revisiting the lake with our little school boy on September 2, the child, pointing to a group on the water asked eagerly, "What are those?" adding, "They're babies of some kind," and so they were, four tiny dark ducklings, feeding on surface water weeds. A Pied-billed Grebe, two female Blue-winged Teal, and a female Ruddy were swimming near them, but no one claimed the little tots and I was at a loss to know whether they belonged to the Teal or the Ruddy. Finally, however, after letting the Teal and the Pied-bill swim around close to the little ones for some time, the Ruddy came swimming over all bristled up and chased off a Pied-bill with such an air of exclusive ownership that Solomon himself would have felt quite satisfied. The little school boy watched the proceeding with great interest. When he saw the wondrous blue bill of the Ruddy drake that he had been anxiously looking for, he exclaimed, "Oh, isn't that pretty—that *blue* bill—Say, but that is pretty!" and when we started home he ejaculated fervently, "I'm glad I *came*"—a remark deeply appreciated, as agriculture in the fascinating form of a threshing outfit to watch had threatened to outrival ornithology.

As we walked back through the woods, a northern visitor, a Red-bellied Nuthatch, crossed our path with its autumnal message. That was not the first pleasant surprise I had had in these woods. Two weeks before—on August 17—a family of three-quarter grown Long-eared Owls had burst out of a tree before my very eyes, one of them lighting not far away, sitting up parallel to the tree trunk which it closely resembled. Its ears were still short and as it lowered its head, its eyes inside its facial disk had a strained anxious look. Retreating to another perch, it turned its head around over its back to look at me. Although the middle of the day, its ears were alertly sensitive, for at the sound of Crows or a flock of Ducks passing over, it looked up.

From its perch in the sun it again flew to a branch in the shade, and leaned over twisting its head around trying to see me better. But soon its eyes stared wide as if it had to try hard to keep awake, and presently its lids drooped. When I walked up closer, however, it drew itself up very tall and thin, with ears erect like the pictures of protective attitudes, one wing curiously drawn half way across its breast helping to narrow its body and make it look more like the tree trunk. When nothing happened, it relaxed, let itself down shorter, and let go the branch with one furry foot, standing on the other foot ready for a nap.

What was that noise below? It turned its head to look over its shoulder, and with face forward, pressed on hard with its eyes. Seeing nothing there it looked back over the other shoulder in the same intense, strained manner. Still discovering nothing it gave a little yawn. But when some Waxwings whistled softly near by and a Mallard quacked in passing, it quickly looked up. Then perhaps missing its family, it gave the weak cry of a young bird, which like that of the Ferruginous Rough-legs, was absurdly out of keeping with its size but went well with the shortness of its ears. When I answered in my best Owlese, it cocked its head drolly on one side. That would bear looking into. Again worming its big head down and around, its facial disk setting its face quite apart from its neck, it studied me intently, and not liking what it saw, with a queer little *qua, qua, qua* flew off. Several times more it lit and flew, and I followed. When it crossed a Kingbird's beat, that self-appointed guardian of the peace flew down at it—*once*. Why he stopped at that, I was at a loss to imagine, unless so young to his trade that the sight of the big-eyed, big head raised upon him at close quarters was a deterrent. His kingly courage returned when the Owl moved, however, and he flew down and snapped his bill over it. When the young Long-ear lit next, it looked so comfortable on its shady branch that I did not want to disturb it, so, after listening to the call of a Catbird, the song of a Yellow Warbler, and—out of season though it was—the full love song of an Oriole—I went back down the lake toward home.

The next day I had a still greater surprise. Contrary to my usual custom of keeping carefully secreted in the woods above the water, I had gone down on the short strip of beach where the Spotted Sandpipers usually ran up and down, and happening to glance up in the sky saw a compact flock of large white forms advancing. Gulls? No! On they came, with the slow, heavy, stately flight of White Pelicans. As this was before I had seen them at North Sweetwater and I had looked for them in vain since the first small squad seen on Devil's Lake in June, I greeted them with eager anticipations. Fourteen there were, of the great white airships. They were heading southeast against the wind as if coming straight for the one narrow strip of beach that side of the lake afforded. And there I stood on it! Alas! Around they turned, flying back high across the opposite side of the lake. As I gazed up at them their formation characteristically changed from a wedge to a straight line, and then to a confused mass without figure. Overcome with disappointment, in the vain hope that they might come again, I retreated to the woods. Had I kept out of sight before, probably the whole fleet would have lighted on the beach under my very eyes. Realizing at last that there was no hope of their return I went back to the beach to see if they were still in sight. Looking across the west end of the lake, where a threshing machine was building up a straw stack in a harvest field, high in the sky I caught sight of a wavering silver thread, and through the glass the silvery thread turned into a line of white birds, the line forming and reforming till they disappeared in the sky.

5

From the south-east corner of the woods in which stood the hunting lodge, late one August afternoon, after a thunderstorm, there was a charming picture of the peaceful quiet life of the waterfowl undisturbed by man. As I crept in down an old willow-bordered path to the lake and carefully placed my campstool between screening willow branches, the birds went about their affairs

only a few yards from me, all unaware of my presence. A young Catbird flew into the bushes at the lake end of my path, while a Flicker and a Goldfinch came in almost over my head, as undisturbed as the Meadowlark singing outside.

A flock of about forty Ruddies had gathered in the quiet corner out of the wind. In the strong western light that slanted full across the safe harbor, their white cheek patches were dazzlingly snow white, their bodies a warm rufous. A pretty sight they made, riding mirrored on the smooth water, a blue bill and white cheek patch in duplicate making indeed a striking picture. A big mother Canvasback swam in through an open space between the Ruddies—a steamship plowing its way among motor boats—leaving a long, strongly marked wake behind her and diving at its point. In feeding, one of her family stood on his head, tail in air; another, after bathing, rose so straight he almost tipped over backwards.

Three young Coots climbed up eagerly into a yard of tule that rose out of the water in the center of the protected harbor, its slender stems charmingly reflected below. Coots' Rest I had come to call it, from seeing a matronly old Coot standing there preening herself, looking round and comfortable as if she were on her own home island. Now, however, two of the young ones got to scrapping and rose bill to bill, one finally driving the other into the water. His undisputed possession of the little island did not last long, however, for the queenly old Canvasback who had come in among the Ruddies swam up to the pleasant resting place quite as if all the lake were hers by right, and the aggressive young Coot hurriedly slipped off into the water.

At one time the yard of tules constituting Coot's Rest was taken possession of by a mother Shoveller who in moving around showed her orange under mandible and feet, and was apparently taking solid comfort on the little island—for even Ducks seem to like to tread on terra firma occasionally, perhaps to get their sea legs off! When she went out to feed, she let the mud strain out of her bill in good spoonbill fashion. Another time four Ducks were enjoying the wisp of tule, one barely visible inside the thickest part of the screen, while swimming around close by, Blue-winged Teal tipped up their wings so the wide blue patch and its bordering white and green showed, and others of their confreres flew in calling softly. When a Ruddy autoeratically rushed along by Coots' Rest, routing out one of the Ducks which was taking its ease, a big flock of Ducks passed close over the water, and Ruddy, canting his head over to look up, apparently forgot the small tule island and swam on.

The evening that the waterfowl gathered in the protected harbor to get out of the wind, across the lake, above the harvest fields dotted with sheaves of wheat, a creamy cumulus cloud arose, to be reflected in the lake. Scattered over the harbor, Coots were getting their evening meal in various ways—picking lightly from the surface, plunging their heads under water, or diving with a splash that sent the water sparkling into the air.

On the outer edge of the circle of Ruddies, Coots, and Canvasbacks, I was glad to discover my family of Holbøll Grebes, characteristically keeping a little apart. The sun touched up the red throat and white face patch of the old mother who was followed close by her little one swimming with bill open, talking as usual in a soft young voice close by her ear. When she dived and came up with food, two of the young swam toward her for their share, but she had taught them to fend for themselves, and even the little Talker was now diving

quite freely. Before sunset the Holbøll call drew my eye to a reunited family, the mother with all three young. Between dives there once seemed to be a second adult, as if the father had joined the family again. The suggestion was so pleasant that I found myself making excuses for his absence. Perhaps to make the group less conspicuous he kept away in the day time, but before night, came to help guard the little ones during the hours of darkness.

A sudden splash! Probably the Black-crowned Night Heron on the post just beyond had caught a minnow. As I glanced around the curving tule border of the harbor, warm in the glowing light, another Heron's form was dimly outlined—a hunter in his blind. In the smooth mirror of the lake, the cumulus cloud above the harvest field was growing salmon. The sound of a binder came on the wind. Swallows twittered, flying swiftly overhead, and small squads of Ducks swung in. Two Pintails lit outside the circle of waterfowl and sitting high, with long necks raised, looked nervously on, not having learned the security of the quiet refuge; but from within the circle, the homelike quack of Mallards came from a band swimming around self-absorbed and unafraid. Flocks of Ducks, Gulls, and Crows, crossing overhead to their nightly roosts made no ripple in the life of the little harbor, in which was heard the soft *tu-weep* of the Spotted Sandpiper, well suited to the stillness of the peaceful, sunny bay.

As I carefully withdrew leaving the birds undisturbed in their safe haven for the night, I passed up the road by the lake now bordered with golden wild flowers. Looking west I could see not only the connecting Coulee, but the white line of the large Sweetwater beyond the Bridge. From the east a flock of Black Terns came speeding in. From the sunset a golden portico was reflected in the lake, its illumination spreading to a wide golden band reaching across the water. Into the east came a soft pink afterglow, and well up in the sky rode the harvest moon, while the weary harvesters, their day over at last, were wending their way slowly home.

(To be continued)

NOTES ON THE ELEGANT TERN AS A BIRD OF CALIFORNIA

By JOSEPH GRINNELL

(Contribution from the Museum of Vertebrate Zoology of the University of California)

THE Elegant Tern (*Sterna elegans*) is one of the several species of sea birds which nest altogether to the south of the United States and yet which appear at certain times of the year well north of our southern borders. It is listed as a bird of California upon rather meager basis, and some of the general statements made during recent years in regard to the manner of its occurrence, by the present writer among several, are likely to have left the hearer or reader with incorrect impressions. The purpose of the present article is to assemble all that has been published to date with regard to the Elegant Tern as occurring in California; to scrutinize this information closely, and to put on record an increment which has resulted from field work of the California Museum of Vertebrate Zoology.

Sterna elegans was originally described by William Gambel (Proc. Acad. Nat. Sci. Phila., 1848, p. 129), who himself "procured this species on the Pacific coast of Mexico, particularly at Mazatlan at the mouth of the Gulf of California". Some subsequent authors who credited the species to "California" or the "coast of California", may have merely inferred this, or may have carelessly transcribed the term California, alone, from Gambel's statement as just quoted. In the case of Coues (Proc. Acad. Nat. Sci. Phila., 1862, p. 540), who credits the Elegant Tern to the "Coast of California", without remark, it is of course possible that specimens taken in California were at hand. But if so, no other, or more exact, reference has been made to them in print. Not until 1868 was specific evidence given, of specimens having been actually secured within the state of California as now defined.

The first well-founded ascription of the Elegant Tern to California, then, insofar as known to me, was that by Cooper (Proc. Calif. Acad. Sci., iv, 1868, p. 10). The statement made by this author is as follows: "The first specimens I have seen from this State were shot by Mr. Lorquin in S. F. Bay, and are in fine plumage." It is to be inferred that two or more examples were encountered, but no dates or further facts are given. The whereabouts of Lorquin's birds, if they still exist, are unknown to me.

Belding apparently never himself met with this species, but he states (MS, "Water Birds", 1897): "Mr. J. C. Parker has a specimen, shot at San Diego, he informed me, in summer." The phrase "in summer" is so vague that it cannot safely be used in any seasonal study of the species.

As a result of his own observations upon the water birds of Monterey Bay in the fall of 1896, Mr. Leverett Mills Loomis makes record (Proc. Calif. Acad. Sci., 3rd ser., Zool., II, 1900, pp. 279, 287, 293, 319) of Elegant Terns as follows: September 22, a pair was noted "flying along the bay shore toward Point Pinos". October 9, offshore north of Monterey "a band of eight" was decoyed into close range, "and in another place, one of seven." October 29, three were met with, resting on a patch of drifting kelp. "No examples were noticed in November." This species "was more sparingly represented than its congener *maxima*." It is known that Mr. Loomis took a number of specimens, but these were all destroyed in the San Francisco fire of 1906.

Dr. Louis B. Bishop records (Condor, VII, September, 1905, p. 141) the capture of "an adult male" Elegant Tern at Pacific Beach, near San Diego, September 21, 1904.

In 1910, Mr. Rollo H. Beck wrote (Proc. Calif. Acad. Sci., 4th ser., III, September 17, 1910, p. 64) that in his extensive collecting for the California Academy of Sciences on Monterey Bay at various times between September 8, 1903, and January 22, 1910, he had never himself met with the Elegant Tern.

On August 2, 1910, Mr. Beck began regular work with the water birds on Monterey Bay for the California Museum of Vertebrate Zoology, and continued thus until March 1, 1911. During this period he encountered the Elegant Tern once, on October 27, 1910, when one example, a male (now no. 18382, Mus. Vert. Zool.), was obtained. His field notes of that date indicate that four of the birds were seen by him late in the afternoon off China Point (Pacific Grove), going south. The one shot had a fish in its stomach. The same four birds, presumably, had been seen earlier in the day (about 2 p. m.) off Seaside.

In the fall of 1918 collecting was done at Morro, San Luis Obispo County,

by representatives from the California Museum of Vertebrate Zoology, from September 18 until November 7. Messrs. Halsted G. White, Joseph Dixon and J. Grinnell constituted the party, and one or more of these collectors worked in the immediate vicinity of Morro during the entire time. For a portion of this period the Elegant Tern proved to be a fairly common water bird on Morro Bay, or else on the outside ocean beach. The first one was positively identified on September 22, the last on October 4. Field notes follow.

September 22: One shot from company with six Royal Terns flying over the breakers of sea-beach, about two miles north of Morro (H. G. W.). On Morro Bay close to Morro, many terns seen, but not closely, of three sizes, the middle-sized one believed to be the Elegant (J. G.).

September 23: Around sandbar in Morro Bay, one Elegant Tern seen in a bunch of about twenty Royal Terns. The bill of the latter looked to be darker orange at base. Elegant appeared midway in size between Forster and Royal. No "rosy flush" could be seen in the plumage of the Elegant, even within forty yards, in strong sunlight, and with the aid of binoculars (J. D.).

September 27: One shot from company of about thirteen Royal Terns flying along sea-beach north of Morro. The bird was recognized by its smaller size, and at a distance of about twenty yards the pink coloring beneath was noticed. In flight it looked like a Royal Tern but seemed "more airy", or more graceful. It more often "cut figures in the sky", in other words it was slightly less heavy on the wing, this perhaps due merely to its smaller size (H. G. W.).

September 28: Along the sea-beach two miles north of Morro, thirty-two terns were encountered. Four of these were Forster, about twenty were Royal, and about eight were Elegant. The collector used a dead Willet as a decoy, and by throwing this into the air and letting it splash in the water, three of the Elegant Terns were brought into shot-gun range and secured. In this case it seemed that of the three species of tern, the Elegant showed the most curiosity (H. G. W.). Also one seen flying "just out of range, over the spit" opposite Morro (J. D.).

September 29: Two seen along sea-beach within two miles north of Morro (H. G. W.). Flock of about twenty-five seen on the Bay close to Morro. One shot. Pink bloom "not visible even when the birds were within easy shot-gun range" (J. D.).

October 1: Elegant Terns, in company with Arctic, kept flying about sandbar in Morro Bay during visit there (J. D.).

October 2: One Elegant secured at sandbar in Bay out of a mixed company of Royal, Elegant and Arctic, about one hundred in all (J. D.).

October 4: On sandbar in Morro Bay: terns wild; of these the Royal, Elegant and Arctic took flight in about the order named (J. D.).

As regards marks for field identification, there seems to be no outstanding positive feature by which the Elegant Tern may be distinguished at any ordinary distance from its congeners, unless conditions be such that relative size is determinable. From the notes of the field collectors just quoted, it is to be inferred that the pink blush of the lower surface can be seen clearly only under very exceptional circumstances. The relative slenderness of the bill of the Elegant *might* be used, if the proportions of this member in the Royal be vividly in mind or if birds of the two species be seen contemporaneously within short range.

Relative size is quite positively diagnostic of the Elegant, if other sea-coast frequenting species of terns be in sight at the same time. Roughly, *elegans* is a large tern, yet decidedly smaller than its usual associate, the Royal. Some exact figures will here be instructive. Weight is, of course, a much more accurate index of the volume or "bulk" of a bird, generally speaking, than is any measurement such as total length or length of closed wing. The seven

specimens of Elegant Tern listed in the accompanying table show an average weight of 232 grams. Five specimens of Royal Tern shot at about the same time and place gave an average weight of 489 grams. One example of the Common Tern weighed 113 grams. The other terns in the vicinity at the time the Elegant Terns were met with at Morro Bay were the Arctic and Forster, but unfortunately weights of these were not secured. The last two, however, show about the dimensions of the Common and may be inferred to weigh about the same. As to relative size, then, the Elegant Tern is about half the bulk of the Royal, and yet about twice that of the Common, Arctic or Forster. In other words, the Elegant is fairly midway in size between the Royal and the tern next smaller than itself—obviously a good criterion for recognition when any of the species in question are about.

As to behavior, *elegans* is a typical tern. One observer quoted above thinks that it is more "airy" or graceful in flight than its heavier associate *mazima*. But I confess my own inability to note any decided difference in this respect. Relative size remains the best mark for field identification.

Color notes on *Sterna elegans* were taken by Mr. H. G. White from fresh specimens by direct comparison with the plates in a copy of Ridgway's *Color Standards and Color Nomenclature*, with results as follows:

No. 29579: Bill chiefly coral red, becoming straw yellow towards tip, yellowest at extreme tip. Feet and legs sepia, save for spots of orange on hinder side of tarsus, and same color on soles of all toes. Iris hazel.

No. 29580: Bill ochraceous-orange at base, becoming yellow ocher at tip. Feet and legs black; soles of toes spotted with yellow ocher. Iris hazel.

No. 29581: Bill bittersweet orange at base, antimony yellow at tip. Feet and legs black; tarsus behind, toes, and webs, blotched with bittersweet orange. Iris hazel.

No. 29582: Bill grenadine at base, becoming antimony yellow at tip. Feet and legs black, tarsus solidly so; soles of toes blotched with dull orange. Iris hazel.

No. 29583: Bill salmon color, becoming antimony yellow at tip. Feet and legs black, blotched all the way up, from soles of toes to tibia, with salmon color. Iris hazel.

With drying, the above colors have changed intrinsically but little. Now, after one year has elapsed, there is a general dingy tone, and in the case of no. 29583, which had the bill palest of the five, the red tone, weak at best, has faded out so that the whole bill is dingy yellow ocher. Nos. 29577 and 29578, which were not color-matched when fresh, are also of this yellow-billed type, decidedly different from the reddish orange tone of bill in the other four specimens. With this variation in color of bill in evidence it becomes impossible to use this feature as a field mark.

As regards color of legs and feet, none of our birds has these members solidly black, but they are more or less spotted or blotched with approximately the color of the bill. Ridgway (Birds N. and Mid. Amer., viii, 1919, p. 472) says, "legs and feet black". Coues (Key, 5th ed., 1903, p. 1007) says: "Feet black; soles and under surfaces of claws slightly yellowish". This latter statement more nearly agrees with the condition of our birds.

As to plumage, the Morro series agrees with Ridgway's description (loc. cit.) of what he terms the "post-nuptial (?) plumage". Note the question-mark. Neither am I able to decide definitely as to age. All seven of our birds are in the same stage, whatever it may be, and all seem to have completed a molt recently. The tail tips are but little, or not at all, worn. In all of the skins there is the eosine pink blush on the underparts, this involving not only

the body proper but also the crissum, the basal half of the rectrices, the axillars, and the lining of the wing. There seems to be no sexual difference in respect to the depth of this blush. Slightly the pinkest happens to be a female (no. 29579). Coues, curiously, states (loc. cit.) that "in winter" there is "no pink blush of under parts". Ridgway, by implication, says that there is; and our birds are all more or less pink.

WEIGHTS (IN GRAMS) AND MEASUREMENTS (IN MILLIMETERS) OF SEVEN EXAMPLES OF *STERNA ELEGANS* FROM MORRO, CALIFORNIA

| No. Mus. Vert. Zool. | Sex | Date | Collector | Weight (grams) | Wing | Tail | Culmen | Bill from nostril | Gonys | Depth of bill at middle of nostril | Tarsus | Middle toe and claw |
|-------------------------------|-----|----------------|-------------|-------------------|-------|-------|--------|-------------------|-------|---------------------------------------|--------|---------------------|
| 29579 | ♀ | Sept. 22, 1918 | H. G. White | 226.1 | 297 | 151 | 59.2 | 44.9 | 35.2 | 11.0 | 29.0 | 30.0 |
| 29580 | ♂ | Sept. 27, 1918 | H. G. White | 227.2 | 306 | 159 | 64.9 | 51.1 | 38.5 | 11.3 | 30.7 | 29.8 |
| 29581 | ♂ | Sept. 28, 1918 | H. G. White | 240.0 | 298 | 129 | 57.7 | 43.3 | 31.0 | 10.8 | 28.6 | 31.7 |
| 29582 | ♀ | Sept. 28, 1918 | H. G. White | 209.9 | 289 | 132 | 55.2 | 41.7 | 31.4 | 9.4 | 27.6 | 28.5 |
| 29583 | ♂ | Sept. 28, 1918 | H. G. White | 240.0 | 291 | 139 | 61.3 | 44.3 | 32.5 | 10.5 | 29.7 | 29.7 |
| 29577 | ♂ | Sept. 29, 1918 | J. Dixon | 262.8 | 317 | 158 | 68.7 | 53.7 | 37.7 | | 30.3 | 31.6 |
| 29578 | ♂ | Oct. 2, 1918 | J. Dixon | 216.8 | 292 | 133 | 60.3 | 45.0 | 33.0 | 11.0 | 29.7 | 30.2 |
| Average | | | | 231.8 | 298.6 | 143.0 | 61.0 | 46.3 | 34.2 | 10.7 | 29.4 | 30.2 |

In measurements, as shown in the table given herewith, the Morro series holds closely to Ridgway's specifications (loc. cit., p. 473). It will be noted that the angle of the lower mandible, marking posterior end of gonys, is far forward of the anterior end of nostril, so ruling out the possibility that our birds, or at least those with yellowish bills, might be representative of the species *Sterna eurygnatha* of eastern South America. This possibility suggested itself because this latter species is described (Saunders, Cat. Birds British Mus., xxv, 1896, p. 85) as having a "lemon-yellow" bill, and the "hind parts of the tarsi, the soles, and and the claws dull yellow." *Eurygnatha* is stated to be identical with *elegans* except as to the color features just referred to and as to the extent of the gonys, which terminates posteriorly "immediately below or very little in front of the anterior portion of the nostril". On the basis of sum-total of characters, *Sterna elegans* is a sharply set-off species, and no difficulty need be experienced in identifying specimens in hand. Measurements alone, as given in the accompanying table, will suffice.

In conclusion, the status of *Sterna elegans* in California, so far as known to date, may be stated as follows: Rather uncommon and probably irregular fall visitant northward along the sea coast as far as San Francisco Bay. Definite stations and dates of occurrence: Pacific Beach (near San Diego), September 21; vicinity of Morro, September 22 to October 4; Monterey Bay, September 22 to October 29; San Francisco Bay (date not recorded).

Berkeley, California, September 14, 1919.

FROM FIELD AND STUDY

Association of Migrating Waders.—Mention of collecting a male and female of the Baird Sandpiper by L. E. Wyman in the July-August CONDOR (p. 172), calls to mind observations made by myself on migrating shore birds on the Atlantic coast during recent seasons. It was early noticed that the first birds to come south in the fall as well as the late ones travelling north in the spring, were very often seen two together. At times they appeared to be male and female, which is quite possible to determine in some species without taking specimens, the female being so much larger and longer billed. At other times they looked just alike. At first I took it for granted that these birds were mated pairs, but more recently I have come to have little confidence in that hypothesis. Too often have a couple of boon companions, separated from the crowd and evidently counting a good deal on one another's society, been of different species, a Least and a Semipalmated Sandpiper or even a Ringneck Plover and one of the smaller species. It also appears that three birds travel in company as often as two, perhaps more often in the late summer, and my belief is that these associations are, in general, purely platonic. We know that there are times when we prefer to travel with one or two chosen companions rather than with a crowd, and the more I see of them the more comparable to our own the social instincts of the shore birds appear. This point of view does not rest on sufficiently definite data to be called a scientific observation, but nevertheless I would like to present it for consideration.—JOHN T. NICHOLS; *New York City, August 15, 1919.*

White-throated Swift in Contra Costa County.—On the left hand side of Pine Canyon, Contra Costa County, about a mile above Ford's Ranch, which is at the entrance to the canyon, are some large rocks containing various ledges and cracks. While passing through the canyon on July 5, 1919, I noticed several White-throated Swifts (*Aeronautes melanoleucus*) sailing about these rocks. I therefore climbed up to see if their nesting site was accessible.

I managed, with stocking feet and small finger holds, to climb up the face of the rock to an almost inaccessible place, where two big rocks come together. In this crack was an unoccupied nest situated on a small wedged-in stone. Four feet above this nest was another which was occupied, as the old bird was flushed. While trying to decide which was the best way to reach this nest, the old bird came back at full speed and swooped up to it almost hitting me in the face. This proves that they do not always slow down in their speed when entering the nest.

After some delicate climbing and balancing, the nest was reached and found to be empty. But right above it, in a small crack, were two young birds almost ready to fly. After trying to poke them down with a small stick I had to give it up as the little birds squeezed farther in the crack. There were more nests elsewhere in the rocks, as about thirty birds were observed sailing back and forth over the canyon.—LUTHER LITTLE, *California Academy of Sciences, San Francisco, California, August 26, 1919.*

Luck.—If the writer had not been possessed of a certain amount of this "article" these notes would not have been written. Briefly told the facts are these.

A certain pair of Nuttall Woodpeckers (*Dryobates nuttalli*) chose a partly decayed fence post for a building site. The same location had been selected by a family of bumble-bees. The woodpeckers started near the top of the post and drilled their excavation downward, while the bees started some two feet below and burrowed upward. The two openings met and the woodpecker remained in possession.

It so happened that Mrs. Woodpecker laid a runt egg which promptly slipped into the trap nest provided by the bumble-bee, and at the time the writer examined the post the small end of the woodpecker egg was protruding from the opening of the bumble-bee excavation, fully a foot below the bottom of the woodpecker's nest. In the woodpecker's dug-out were four normal eggs.

If the runt had been slightly smaller, if the bumble-bee hole had been slightly larger, or if the egg had lodged or broken in its winding journey through the tunnel of

the bee, this tale would not have been written, and the writer would have been short an interesting nest and set of eggs of the Nuttall Woodpecker.—N. K. CARPENTER, *Escondido, California, September 15, 1919.*

Second Occurrence of the Painted Bunting at Solomon, Saline County, Kansas.—A record of the nesting of the Painted Bunting (*Passerina ciris*) near Solomon, Kansas, was given in THE CONDOR, for September, 1918. This year, 1919, I again saw one of the birds near the place where the nest and female were found last year. On June 30, 1919, a male was seen, and it was encountered a second time two days later. I am inclined to think the bird is of more than accidental occurrence in that part of the state and am strengthened in this belief by having seen three males near Chanute, Neosha County. One was seen July 23 and several times later until July 27, a second July 25, and a third July 27, each in a different locality, and several miles apart. I did not look for nests but think it likely that they could have been found, judging from the date of the 1918 nest (June 10) at Solomon. On August 8 still another male was seen just north of Altoona, Wilson County. From these records it would seem that the species occurs regularly farther north than was thought to be the case, or else, what is, perhaps, more likely, its range is being extended northward, possibly from an increase in numbers due to protection. Other Kansas observers may be able to add to our records of the bird.—A. J. KIRN, *Neodesha, Kansas, August 16, 1919.*

A Western Yellowthroat on the University of California Campus.—While working in the gallery of the M. V. Z., on the morning of May 21, 1919, my attention was attracted by a bird-song never before heard by me on or near the Campus. It was faint and directionless through the walls, but I caught enough of it to be keen for an investigation. With the help of Miss Margaret Wythe, I listened from windows on various sides of the building—without, however, hearing the song. The moment I returned to work, I heard it, as faint and directionless as before. Another investigation followed, and another return to work, and so on for half an hour, till I began to imagine that the ghost of a bird's voice was trying to get my ornithological goat, as one might say. But at last, as I listened from an office window, a single clear and near example of the song reached my ears. It was an utterance in four sections, the first three being four-syllabled and exactly alike: *pritisitta, pritisitta, pritisitta, prit*, with accent on the "prit". I had never heard a Yellowthroat song of this exact syllabification, but the chief and important distinguishing character of the song of the species is, after all, its exact repetition of some sort of a two- or three- or four-syllabled "word". Every individual Yellowthroat has quite a stock of different "words", and some are likely to be different from any "words" one would hear another individual sing. Timbre, to be sure, is also a character of the Yellowthroat song—though it varies among and in individuals as widely as does "word"-form. The timbre of this song was hardly typical: it was unusually loose and liquid. The utterance was comparatively slow. Outside the building I found Dr. H. C. Bryant under a bay tree trying to get a look at the singer. He looked as puzzled as I had felt in the gallery. The bird would not show itself except as some sort of a restless flitting warbler with yellow on it somewhere. It went from tree to tree within a limited area round the Museum, returning again and again to trees already visited. It foraged mostly in the bay and pepper trees, but once flew to the top of a large live oak opposite Dr. Grinnell's office window (a favorite place, by the way, for rare visitants to the Campus). We finally decided, in despair, to enlist the services of our doughty field-collector, H. G. White, who soon settled the question by "collecting" the bird. It proved to be a Western Yellowthroat (*Geothlypis trichas occidentalis*)—another new record for the Campus, and one representing a race of Yellowthroat non-resident, and rare even as a transient, in the San Francisco Bay region. It is of interest to note that the bird was foraging exclusively in the high dry tree-tops—whereas one might rather have expected to find it fifty yards away in the tangle of vines and bushes along Strawberry Creek.—RICHARD HUNT, *Museum of Vertebrate Zoology, Berkeley, California, August 1, 1919.*

Evidence as to the Food of the Wood Ibis.—The Wood Ibis (*Mycteria americana*), one of the rarer birds of our state, has long been noted as a bird of peculiar feeding habits. The account given by Audubon and cited by Coues in his "Birds of the Northwest"

(p. 515) will furnish a description of the method by which this bird extracts the food material from the bottom of ponds and rivers and from the muddy water. Analysis of the stomach of a specimen secured at Palo Verde, Imperial County, September 4, 1916, and contained in the California Museum of Vertebrate Zoology, shows the following food elements:

- 10 seeds of the screw bean (*Strombocarpus pubescens*)
- 2 seeds mesquite (*Prosopis glandulosa*)
- Parts of 4 water beetles (*Cybister* sp.)
- Finely comminuted vegetable material.

The seeds were identified by W. L. McAtee and the beetles by E. C. Van Dyke.

This food material is exactly what we might expect to find in the shallow water of the Colorado River. It is of interest that a bird with so large a bill, and with the bill lacking the sieve-like apparatus of a duck's bill, can be so adept at sifting small particles from the water.—HAROLD C. BRYANT, *Berkeley, California, July 1, 1919.*

The Occurrence of the Long-billed Curlew in Northwestern California.—In commenting upon "The Game Birds of California" recently, Mr. H. E. Wilder brought to my attention some facts known to him, but not heretofore published, relative to the occurrence of the Long-billed Curlew along the northwestern California coast. Mr. Wilder has generously urged me to put these facts on record, and furthermore has presented to the Museum of Vertebrate Zoology a specimen of the bird, taken at the mouth of the Eel River, Humboldt County, July 18, 1916. This bird (now no. 30708, Mus. Vert. Zool.) was secured for Mr. Wilder by Mr. Jack Kemp, of Ferndale, and this latter gentleman states that he has shot many of the same species. District Attorney A. W. Hill of Eureka, who spent his early years on the shores of Humboldt Bay, told Mr. Wilder that he had shot many of these curlew there. He said they often came early in the fall before the ducks had appeared. In October, 1918, he saw a flock of seven at the mouth of Eel River.

Later, Mr. Wilder interviewed Mr. Frank Williams of the Russ-Williams Bank of Ferndale, who has spent much time hunting ducks and fishing for salmon along the lower Eel River. Mr. Williams stated that curlew have always been rather common though irregular visitors to that section. He said they usually occur in early fall, and commonly in small flocks; but at one time some years ago they came in great numbers, numerous flocks of 200 or more each being present.

As to subspecies, the bird sent to this Museum by Mr. Wilder falls under the name *Numenius americanus occidentalis*, the Lesser Long-billed Curlew—this on the basis of measurements in comparison with the averages and extremes given by Oberholser (Auk, xxxv, 1918, pp. 189, 193) and by Ridgway (Bds. N. and Mid. Amer., pt. viii, 1919, pp. 391, 394). The bird in question (no. 30708, Mus. Vert. Zool.) is marked "♀", but is so very small for this sex, even in *occidentalis*, that one is tempted to think it more likely a male. It measures, in millimeters: Wing 273; tail 99; exposed culmen 117; tarsus 85.

Of course one example is insufficient evidence that all the curlew visiting the Humboldt Bay region are the Lesser. Further specimens are needed. In west-central California, the larger, Eastern Long-billed Curlew (*Numenius americanus americanus*) is the predominant race during the fall migration, as shown by the considerable number of specimens at hand.—J. GRINNELL, *Museum of Vertebrate Zoology, University of California, August 24, 1919.*

Additional Notes and Records from Colorado.—Since the publication in the Auk (xxxv, 1918, p. 236) of "Notes on Some Species New to the Colorado List of Birds", the following occurrences have been brought to light, which supplement those referred to. All specimens upon which they are based are in the collections of the Colorado Museum of Natural History.

Gavia pacifica. The Colorado record of this species is based upon an immature female (C. M. N. H. no. 7003) from the Edwin Carter collection, taken in the vicinity of Breckenridge, Colo., Nov. 15th, 1887. I am indebted to Mr. A. C. Bent of Taunton, Mass., for assistance in making the determination. In referring to the specimen, he writes, in part:—"Its measurements are rather small for this species, but not too small for a young

female; the shape of the bill, with the curving upper mandible and the angle at the gonys, together with the broad, light edgings of the feathers on the back, are distinctive of this species". He mentions this specimen in his "North American Diving Birds".

This is the first record from Colorado for this bird.

Larus californicus. It may be well at this time to correct the records of this gull credited to Colorado from the Carter collection. The specimen upon which one of the supposed occurrences was based (C. M. N. H. no. 7132), has been re-examined, and proves to be an immature Herring Gull (*Larus argentatus*). It was taken near Breckenridge, Colorado, April 28, 1884. All other large gulls from this collection are either this species or the Ring-billed Gull (*Larus delawarensis*), and all efforts to locate any of the other supposed specimens of *L. californicus* have been unavailing. This species should be withdrawn from the state list.

Icteria virens virens. An examination of a rather extensive series of Chats from eastern Colorado has revealed two undoubted examples of the eastern variety (C. M. N. H. nos. 2908, 4711). The first, an adult male, was taken at Holly, on the Arkansas River, within a few miles of the Kansas line, on May 24, 1913. The second, also an adult male, was secured on Dry Willow Creek, Yuma County, June 20, 1915. Others in the series are apparently intergrades, referable to either *virens* or *longicauda*, and it seems not improbable that the two subspecies mingle freely in eastern Colorado and western Kansas.

This is really a restoration of a subspecies to the Colorado list, as Baird, Brewer and Ridgway mention an example of *virens* from Colorado in their "History of North American Birds", a chat having been taken by Thomas Say near the headwaters of the Arkansas River. It is presumed that this example of *Icteria* was secured by Say when he accompanied Major Long's expedition in 1823. Prof. W. W. Cooke was perfectly justified in dropping the subspecies in 1909 (Auk, xxvi, p. 420), on the records as then known, but the bird is to be reinstated on the facts here stated.

Toxostoma longirostre sennetti. Among the unusual occurrences reported from Colorado, few are of such exceptional interest as the specimen forming the record for this southern form. This bird (C. M. N. H. no. 2359) was taken at Barr, Colorado, in May, 1906. It is an adult female and was originally classified as *Toxostoma rufum* and as such passed unnoticed in the series of that species until a recent transfer of the collections. Then its characteristics and misidentification were brought to my attention.

The specimen is typical in every respect, comparing perfectly with examples from southern Texas.—F. C. LINCOLN, Colorado Museum of Natural History, Denver, September 22, 1919.

California Black Rail at San Bernardino, California.—On August 3 of this year R. B. Herron, one of the oldest ornithologists in California, obtained a live specimen, an adult male, of the California Black Rail (*Creciscus coturniculus*). This fact I consider worth publishing, as, so far as I am able to ascertain, it is a new record from San Bernardino and, with one exception, a record for this portion of southern California. This bird was found in a half dazed condition by a little girl, the daughter of a neighbor of Mr. Herron in this city, and the child, thinking that it was a fledgling that had fallen from the nest, took it to Mr. Herron asking if he could not feed it until it became strong enough to care for itself. Mr. Herron kept the bird, but it died within the next twenty-four hours, when he made a skin of it, which later on he gave to me. The only other record known to me for this section is of a bird taken by Prof. L. Miller at Riverside, California, some time during the month of August, 1893.

The bird obtained by Mr. Herron was in good condition except for a slight abrasion on the head. We have concluded that it flew against an electric light or telephone wire while migrating and was so stunned by the blow that it fell to the ground.—EDWARD WALL, San Bernardino, California, August 16, 1919.

A Second Record of the Buff-breasted Sandpiper in the State of Washington.—The Buff-breasted Sandpiper (*Tryngites subruficollis*) is so scarce a bird on the Pacific coast as to make it seem advisable to publish records of all that we find. It therefore gives me pleasure to state that, when collecting on the Tacoma Flats on September 8, 1919, I was so fortunate as to secure two handsome males of this species. They were together

in the herbage on the bottom of a dried up pond, from which the water had long since gone. This was about a quarter of a mile from water of any kind. A careful search in different directions failed to reveal any more birds of this species, although there was a very extensive migration of land birds as well as water birds. In the stomach of one was the assembled remains of a good sized grasshopper, carefully dismembered, and I was surprised to find that even the coarse, prickly hind legs had been eaten whole.

On the same day I walked up to within twenty feet of a flock of seven Pectoral Sandpipers (*Pisobia maculata*), an interesting bird on the Pacific coast, and watched them for ten minutes. They did not show the slightest fear, feeding up to within a few feet.

Another interesting specimen taken was an adult female Black Pigeon Hawk (*Falco columbarius suckleyi*), which completed my bag of three birds for the day.—J. HOOPER BOWLES, Tacoma, Washington, September 11, 1919.

One Reason for Eliminating Subspecies.—In the recent discussion in the CONDOR on the multiplication of subspecies no one has put forward a reason against them quite so final as that quoted by Prof. F. W. Oliver in his life of Arthur Henfrey (*Makers of British Botany*). Of this great exponent of the 'New Botany' Prof. Oliver says (p. 201): "He more than once expresses the opinion that there was too great a tendency to lump species in the handbooks to the Flora, and he urged on the occasion of the preparation of the third edition of the *London Catalogue of British Plants* that many more forms should find recognition. The editors of the catalogue however successfully opposed the suggestion on the ingenious grounds that it would raise the weight for postage beyond the limits of a blue (twopenny) stamp."—J. H. FLEMING, Toronto, Ontario, September 4, 1919.

A Tradition Nearly Broken.—The discovery was made on the fourth of July, 1919. The writer in company with B. P. Carpenter and friends was searching for oological treasure on a small rocky island of the Coronados group off the coast of Lower California.

A number of petrel nests had been unearthed, each of which contained the traditional single egg or young. But in nearly every colony of nesting birds one finds something unusual and this community proved to be no exception. An egg of the Socorro Petrel (*Oceanodroma socorroensis*) was removed from beneath the parent bird which was of unusual dimensions, measuring 1.50x1.12 inches, whereas a normal egg measures but 1.10x.85 inches. Upon blowing the specimen it proved to be fresh, and contained two yolks. Did not this bird have a set of two eggs started, and did not nature rather than have so time honored a custom broken provide but the one shell?—N. K. CARPENTER, Hooper Bowles, Tacoma, Washington, September 11, 1919.

Some Southern Records of the Horned Puffin.—Judging by the take of specimens the Horned Puffin (*Fratercula corniculata*) has been but a rare visitant along our coast. That this species may at certain times occur in considerable numbers appears to be evidenced by the note in the May-June CONDOR (p. 128) by Franklin J. Smith, and by the following additional records.

Mr. Wm. C. Bohrmann of San Francisco recently presented to the writer a splendid photograph of a Horned Puffin taken at Mussel Rock, March 2, 1919. The bird was found on the ocean beach still alive, but unable to fly. Quoting from a letter: "I carried this bird in my pocket for a mile or so toward the Cliff House. Had figured that some night-prowling raccoon would get him if I left him on the beach. But he looked so miserably unhappy that I finally decided to give him his small chance for life, and I let him go."

Richard Hocking has furnished material for the following note: Mrs. A. S. Allen and Richard Hocking of Berkeley went to Montara Beach on May 24, 1919, to look for some dead birds seen in the same place a week before. Here were found eight Tufted Puf-

flms, two Horned Puffins, two California Murres and one Cormorant. These birds were scattered in the drift wood and had evidently been killed by oil. One Horned Puffin brought back is now skeleton no. 30714 in the California Museum of Vertebrate Zoology. On May 17, 1919, Mrs. Hocking obtained a Horned Puffin at Coast Ways, near Pescadero, which is now specimen no. 30713 in the Museum.—HAROLD C. BRYANT, Berkeley, California, June 26, 1919.

EDITORIAL NOTES AND NEWS

Criticism has come to the Editor of THE CONDOR either directly or, more often, through indirect channels relative to the kinds of articles being published. Such criticism is various, to the effect that our magazine should publish proportionately more local lists, or fewer local lists; more reviews or no reviews at all; more life history accounts; etc., etc. Here is one determining factor, taking into consideration the volume for 1919, which concludes with this issue: We have put out just as many pages (252) as the money available pays for, this being determined by very close calculation on the part of our Business Managers. Now, as furnishing data to govern the Editor in the future, he hereby requests such of our readers as are sincerely concerned for the well-fare of THE CONDOR to look over volume XXI critically and to write to him frankly as follows: What class of articles appeared to you as most worth publishing? What class of contributions—reviews, minutes, communications, lists, autobiographies—might have been left out altogether, their place being taken by other, more worthy, matter? What were the best kinds of illustrations, and what others might well have been omitted? The status of the annual roster was settled by vote of the Club early in the present year—and favorably to the continuance of that feature. Now the Editor invites views in regard to the further policy of THE CONDOR as outlined above. We cannot publish any greater amount of material with the limited funds in hand; but we can change the kind of matter printed to some degree, although limited always by the kind and amount furnished by our contributors. What are your ideas?

As regards the splitting of genera, in other words, the determination of the limits of any genus, we would call the attention of our readers to the article in the October (1919) *Auk*, by Mr. Ned Hollister, entitled "The systematic position of the Ring-necked Duck". Mr. Hollister's conclusions in regard to the constitution of the Genus *Marila* are certainly based on a sound and clearly set forth line of reasoning. It will be remembered that it has been recently proposed to set off the Canvasback in one genus, the Redhead in another, and the Scaups in a third! Hollister's careful study of the facts, and of the other considerations involved,

shows that *Marila* as it now stands should be "left without any subdivision at all"—with which conclusion we heartily concur.

The current tendency in some quarters toward the suppression of the private collector seems to have gone to great lengths in Minnesota. In Dr. T. S. Roberts' useful and attractive handbook entitled "A review of the ornithology of Minnesota" (May, 1919) we find a statement in the "Addendum" to the effect that permits to collect birds, nests and eggs for scientific purposes are in that state to be issued only to public institutions that maintain zoological collections. Dr. Roberts points out that this attitude is directly opposite to that taken by the Federal government and that the effect will be directly toward discouraging interest in ornithology and will eventually lead to a dearth of trained ornithologists. We entirely agree with the stand which he takes.

Mr. George Willett has established himself and family for the winter at Craig, Prince of Wales Island, Alaska. He has arranged to devote practically his entire time to ornithology, and since he is, as far as we know, the first active bird student to winter in southeastern Alaska we may expect valuable results in the way of new facts concerning the seasonal behavior of the birds there. Practically nothing is now known, for instance, in regard to the route of migration of many of the birds which summer in western Alaska and which winter in California. Whether or not they follow the coast line closely, traversing the outer of the coastal islands, or whether they pursue an off-shore route more or less distant from the land, remains to be proved. Mr. Willett's findings will doubtless bear importantly upon this problem.

The Thirty-seventh Stated Meeting of the American Ornithologists' Union was held in New York City, November 11 to 14. Fellows elected were Alexander Wetmore and Joseph H. Riley; Henry W. Henshaw became a Retired Fellow. The only Western Fellow in attendance was Harry S. Swarth, representing the California Museum of Vertebrate Zoology.

Four months of biological field work has been carried forward in the State of Wash-

ington during the season just passed under the auspices of the Biological Survey, U. S. Department of Agriculture. Cooperating with the Survey in the field work at different times were the following: Professor William T. Shaw, State College of Washington, Pullman; Professor H. S. Brode, Whitman College, Walla Walla; Professor J. W. Hungate, State Normal School, Cheney; Professor J. B. Flett, National Park Service, Longmire; Mr. William L. Finley and Mrs. Finley, Portland, Oregon; and Stanton Warburton, Jr., Tacoma. The Biological Survey was represented for a part of the time by Mr. Stanley G. Jewett, Predatory Animal Inspector, Pendleton, Oregon; and throughout the season by Mr. George G. Cantwell, Field Assistant, Puyallup, Washington, and Dr. Walter P. Taylor, Assistant Biologist, Washington, D. C., the latter in charge of the work. Investigations were made in the Blue Mountains area of extreme southeastern Washington, in which occurs an unusual mixture of Rocky Mountain and Cascade Mountain types; and in Mt. Rainier National Park, in connection with which the circuit of Mt. Rainier was made for the first time, so far as known, by any vertebrate zoological expedition. Mr. Cantwell is continuing the survey through the fall and winter, being engaged at present in working the bunchgrass and sage-brush country of eastern Washington.

Mr. Harry Harris, of Kansas City, Missouri, has recently brought to our attention the very interesting details of the trial of the case which tested the validity of the Federal Migratory Bird Treaty Act in the United States Court at that point. It will be remembered that Missouri has been the center of opposition to the provisions of this Act from the start, both on the part of one of the United States senators at the time the bill was before the Senate and subsequently when it came to enforcing the law. It is a satisfaction to all who have been concerned in securing this important achievement in conservation to know that even though the case above referred to was tried in the "enemy's country" the law was decided to be altogether constitutional, and was not "smashed", as many local sportsmen wished, so they could resume spring shooting of ducks.

A move is on foot, the success of which is already guaranteed, to found a memorial in honor of the late Frederick Du Cane Godman, known so favorably to American ornithologists for his work in collaboration with Osbert Salvin on neotropical birds. The memorial in view will take two forms, a bronze tablet, and a foundation to be known as "The Godman Exploration Fund", and it

will be administered in the interests of the British Natural History Museum, at South Kensington, England. This institution, through Mr. W. L. Sclater, Honorary Secretary of the Godman Memorial Committee (10, Sloane Court, London, S. W. 1), invites contributions of money for this purpose, and gifts from persons interested should be addressed as above. We heartily endorse the above undertaking, in that it will perpetuate the name of one who in his lifetime contributed, himself, generously toward the development of New World ornithology.

During the years 1914-16 extensive field work was carried on under the auspices of the California Museum of Vertebrate Zoology in a section across the Sierra Nevada from Snelling to Mono Lake, embracing the Yosemite Valley and adjacent scenic spots much frequented by summer visitors to the region. During this period specimens, photographs and notes were gathered with the purpose of drawing up a general report on the vertebrate animal life of the region. Preparation of this report was suspended during the war; but the work has now been resumed. A short supplementary field trip was made during the early summer of the present year by Joseph Grinnell and Tracy I. Storer, of the Museum staff. This trip had as its objective the gathering of additional information, especially on the nesting times and nesting habits of certain of the birds not previously studied to advantage. Camps were established near Snelling and Coulterville in the foothills, and in the Yosemite Valley, while shorter stops were made at three stations near the rim of the Valley. The results were quite satisfactory. All of the facts gathered on this and the earlier field trips are being incorporated into a hand manual which will serve as a guide to the identification of the mammals, birds, reptiles and amphibians of the region, the places in which the species are to be found, their habits, times and places of breeding, their food, and their general relations in the scheme of nature as exhibited in the Yosemite region.

MINUTES OF COOPER CLUB MEETINGS

JUNE.—A meeting of the Cooper Ornithological Club, in affiliation with the Western Society of Naturalists, was held at Pasadena on June 19 and 20, 1919, at the annual meeting of the Pacific Division, American Association for the Advancement of Science. Abstracts of papers presented are published in the Bulletin of the Ecological Society of America, July, 1919. Numerous members of both Divisions were in attendance. As this was in the nature of a special meeting, no

attempt was made to transact formal business.—L. E. WYMAN, *Secretary Southern Division*.

SOUTHERN DIVISION

JULY.—The regular monthly meeting of the Cooper Ornithological Club, Southern Division, was held at the Museum of History, Science and Art, July 31, 1919, with Vice-President Robertson in the chair and W. Lee Chambers, Secretary pro tem. Other members present were Messrs. Appleton, Daggett, Edwards, Hanaford, Sidney Peyton, and Stormont. Otho LaPort was a visitor.

Proposals for membership were as follows: By W. Lee Chambers, Mary E. Raker, Portland, Oregon; Miss Margaret Ware Whitney, Pasadena; Clark Perkins Streater, Santa Cruz; Francis R. Cope, Jr., Dimock P. O., Pennsylvania; Morton R. Cheesman, Murray, Utah; Chester T. Boynton, Highland Park, Ill.; Frederick W. Cook, Seattle, Wash. The name of Leo Brune, Grand Dalles, Washington, was presented by Stanley G. Jewett; Daniel Bernard Bull, San Jose, by L. G. Peyton. Also two from the Northern Division: B. C. Bell, San Francisco, and Harold Heath, Palo Alto.

Letters from George Willett, in Alaska; J. Eugene Law, in Arizona; and Ralph E. Dodge, concerning birds in France, were read, while Mr. Peyton told his experiences in France.

For a summer affair, when so many members are absent from the city, the meeting was considered a success, and certainly was not lacking in features of interest. Adjourned.—W. LEE CHAMBERS, *Secretary, pro tem*.

AUGUST.—A special meeting of the Southern Division, Cooper Ornithological Club, was held at the Museum of History, Science and Art, at 8:00 P. M., August 4, 1919, for the purpose of affording members an opportunity to meet Dr. Witmer Stone. Several of the most active members were away on extended collecting trips, while numerous others were out of town enjoying the vacation season. A hurry call, however, brought out ten, with wives and friends, to give Dr. and Mrs. Stone a proper greeting.

The meeting was called to order by Vice-President Robertson, who delivered a short address of welcome, following which Dr. Stone gave an interesting account of recent experiences in the Chiricahua Mountains, Arizona, where he and Mrs. Stone had spent many weeks collecting in company with Mr.

and Mrs. J. E. Law. His description of localities and incidents, and of material collected, was not only highly entertaining, but equally instructive; and the consensus of opinion was that the evening had been a most profitable one to the Doctor's audience. Adjourned.—L. E. WYMAN, *Secretary*.

AUGUST.—The regular monthly meeting of the Cooper Club, Southern Division, was held at the Museum of History, Science and Art, at 8:00 P. M., August 28, 1919. President Miller was in the chair, with other members present, as follows: Messrs. Brown, Chambers, Colburn, Daggett, DeGroat, Edwards, Hanaford, Nokes, Reis, Rich, Robertson, and Wyman.

The minutes of the regular meeting of July 31, and of the special meetings held June 19 and 20, and August 4, were read and approved. On proper action reading of an accumulation of minutes of the Northern Division was declared suspended. Applicants whose names were presented May 25 and July 31 were elected on motion by Dr. Rich, seconded by Mr. Chambers, that the Secretary cast the electing vote. New names presented were: Richard C. Harlow, State College, Pennsylvania, by Wright M. Pierce; Joseph T. Greenleaf, Jr., Seattle, Wash., by Walter P. Taylor; James Haynes Hill, New London, Conn.; Loyal Edgar Smith, Sisson; A. C. Johnson, Whittier; and Mary Cheney, South Manchester, Conn., by W. Lee Chambers.

A letter from Mr. W. L. Dawson, inviting the Southern Division to hold the September meeting at Santa Barbara, at the Museum of Comparative Oology, was presented by the Secretary; but as this date (the last Sunday of the month) was preoccupied by a standing invitation from Dr. L. H. Miller to hold the meeting at his home on the Arroyo Seco, the acceptance of which invitation has become an established custom, the members voted to accept the latter. It was the sense of the meeting that October 25 would be an acceptable date to visit Santa Barbara, and the Secretary was instructed to write to Mr. Dawson to that effect.

Followed a letter from the Biological Survey, relative to lead poisoning among wild ducks, the result of swallowing shot probed from the mud of ducking-grounds that have been shot over for a long period.

Dr. Miller, having just returned from an extended vacation in the Sierras, related many interesting observations in regard to the food and habits of the birds encountered. Adjourned.—L. E. WYMAN, *Secretary*.

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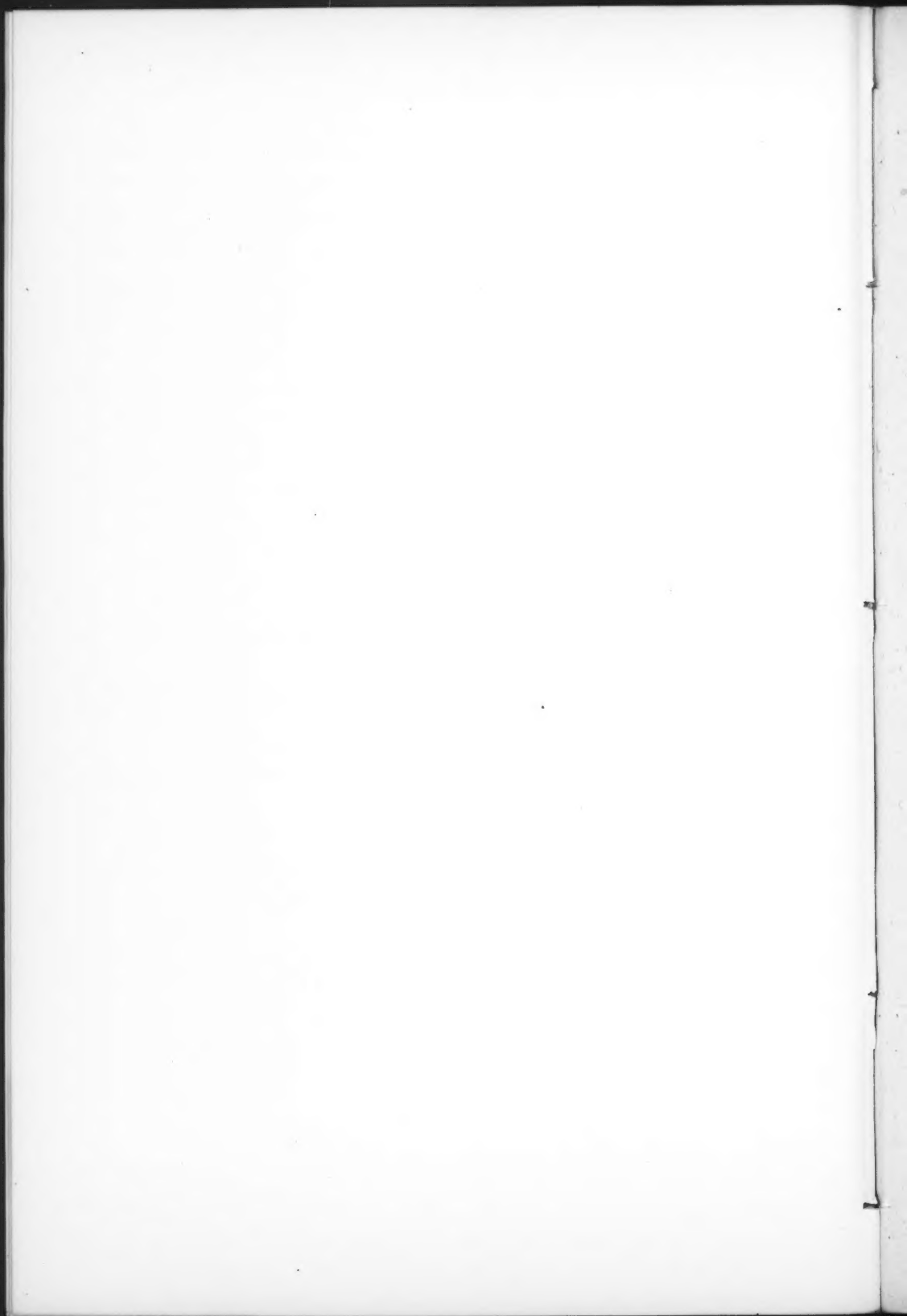
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